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IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Application of

PATENT

Michael Kühn et al.

:

Serial No.: 10/519,784

Group Art Unit:

Filed: December 29, 2004

Examiner:

For:

HYDROPNEUMATIC SUSPENSION

Commissioner for Patents P.O. Box 1450 Alexandria, VA 22313-1450

SUBMISSION OF ENGLISH LANGUAGE PRELIMINARY EXAMINATION REPORT

Commissioner for Patents P.O. Box 1450 Alexandria, VA 22313-1450

Sir:

Submitted herewith is an English language Preliminary Examination Report for the above-identified application.

Respectfully submitted,

Mark S. Břícks

Reg. No. 28,770

Roylance, Abrams, Berdo & Goodman, LLP 1300 19th Street, NW, Suite 600 Washington, DC 20036 (202) 659-9076

Dated: May 17, 2006

PATENT COOPERATION TREATY

From the INTERNATIONAL BUREAU

PCT

NOTIFICATION OF TRANSMITTAL
OF COPIES OF TRANSLATION
OF THE INTERNATIONAL PRELIMINARY REPORT
ON PATENTABILITY
(CHAPTER I OR CHAPTER II
OF THE PATENT COOPERATION TREATY)

(PCT Rules 44bis.3(c) and 72.2)

| То: | |
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| | Bartels und Partner Patentanwälte |
| BARTELS UND PA Lange Strasse 51 70174 Stuttgart ALLEMAGNE | Received: 04 MAI 2006 |
| | TERMIN |
| | |

Date of mailing (day/month/year)
27 April 2006 (27.04.2006)

Applicant's or agent's file reference 40cdh/229149

International application No. PCT/EP2004/003759

IMPORTANT NOTIFICATION

International filing date (day/month/year) 08 April 2004 (08.04.2004)

Applicant

HYDAC SYSTEM GMBH et al

- 1. Transmittal of the translation to the applicant.
 - The International Bureau transmits herewith a copy of the English translation of the international preliminary report on patentability (Chapter I).
 - The International Bureau transmits herewith a copy of the English translation of the international preliminary report on patentability (Chapter II).
- 2. Transmittal of the copy of the translation to the designated or elected Offices.

The International Bureau notifies the applicant that copies of that translation have been transmitted to the following designated or elected Offices requiring such translation:

None

The following designated or elected Offices, having waived the requirement for such a transmittal at this time, will receive copies of that translation from the International Bureau only upon their request:

AE. AG. AL. AM. AP. AT. AU, AZ. BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EA, EC. EE, EG, EP, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV. MA, MD, MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OA, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW

3. Reminder regarding translation into (one of) the official language(s) of the elected Office(s).

The applicant is reminded that, where a translation of the international application must be furnished to an elected Office, that translation must contain a translation of any annexes to the international preliminary report on patentability (Chapter II).

It is the applicant's responsibility to prepare and furnish such translation directly to each elected Office concerned within the applicable time limit (Rule 74.1). See Volume II of the PCT Applicant's Guide for further details.

The International Bureau of WIPO 34, chemin des Colombettes 1211 Geneva 20, Switzerland

Authorized officer

Agnes Wittmann-Regis

Facsimile No.+41 22 740 14 35

Facsimile No.+41 22 338 89 70

Form PCT/IB/338 (January 2004)

PATENT COOPERATION TREA TY Eingegangen:

Bartels und Partner Patentanwälte -

Received:

04 MAI 2006

INTERNATIONAL PRELIMINARY REPORT ON PATERTMENLITY (Chapter I of the Patent Cooperation Treaty)

(PCT Rule 44bis)

| Applicant's or agent's file reference 40cdh/229149 | FOR FURTHER ACTION | See item 4 below | |
|--|---|--|--|
| International application No. PCT/EP2004/003759 | International filing date (day/month/year) 08 April 2004 (08.04.2004) | Priority date (day/month/year) 09 May 2003 (09.05.2003) | |
| International Patent Classification (8th See relevant information in Form F | h edition unless older edition indicated) PCT/ISA/237 | | |
| Applicant HYDAC SYSTEM GMBH | | | |

| 1. | This international preliminary report on patentability (Chapter I) is issued by the International Bureau on behalf of the International Searching Authority under Rule 44 bis.1(a). | | | | |
|----|---|---|--|--|--|
| 2. | This REPORT consists of a total of 6 sheets, including this cover sheet. | | | | |
| | In the attached sheets, any reference to the written opinion of the International Searching Authority should be read as a reference to the international preliminary report on patentability (Chapter I) instead. | | | | |
| 3. | This report contains indications relating to the following items: | | | | |
| | Box No. I | Basis of the report | | | |
| | Box No. II | Priority | | | |
| | Box No. III | Non-establishment of opinion with regard to novelty, inventive step and industrial applicability | | | |
| | Box No. IV | Lack of unity of invention | | | |
| | Box No. V | Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement | | | |
| | Box No. VI | Certain documents cited | | | |
| | Box No. VII | Certain defects in the international application | | | |
| | Box No. VIII | Certain observations on the international application | | | |
| 4. | | ommunicate this report to designated Offices in accordance with Rules 44bis.3(c) and 93bis.1 but makes an express request under Article 23(2), before the expiration of 30 months from the priority | | | |

| | Date of issuance of this report 18 April 2006 (18.04.2006) |
|---|---|
| The International Bureau of WIPO 34, chemin des Colombettes 1211 Geneva 20, Switzerland | Authorized officer Agnes Wittmann-Regis |
| Facsimile No. +41 22 740 14 35 | Telephone No. +41 22 338 89 70 |

Patentanualte

Eingegangen: 04. MAI 2006

PATENT COOPERATION TREATMIN

| INTERN | ATIONAL SEARCH | ING AUTHOR | ITY | | *** | E |
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| Го: | | | | • | PCT | Slation |
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| | | | | | RITTEN OPINION OF THE IONAL SEARCHING AUTHO | RITY |
| | | | | | (PCT Pule 43hir 1) | |
| · | | | | | (PCT Rule 43bis.1) | |
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| | | | | Date of mailing (day/month/year) | | |
| Applica | nt's or agent's file refere | ence | • | FOR FURTHER A | ACTION | |
| 40c | dh/229149 | | | | See paragraph 2 below | |
| Internati | onal application No. | | International filing date (| day/month/year) | Priority date (day/month/year) | |
| PCT | /EP2004/00 | 37 59 | 08.04.2004 | | 09.05.2003 | |
| Internati | onal Patent Classificati | ion (IPC) or both | national classification and | d IPC | <u> </u> | |
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| Applica | nt . | | | | | |
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| 1. | F | indications relat | ting to the following items | : | | |
| | Box No. I | Basis of the | opinion | | | |
| | Box No. II Priority | | | | | |
| | Box No. III Non-establishment of opinion with regard to novelty, inventive step and industrial applicability | | | | | |
| | Box No. IV Lack of unity of invention | | | | | |
| | Box No. V Reasoned statement under Rule 43bis.1(a)(i) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement | | | | | |
| | Box No. VI | Certain doci | uments cited | | | |
| | Box No. VII | Certain defe | cts in the international app | olication | | |
| | Box No. VIII | | •• | | | |
| | Box No. VIII | Certain oose | ervations on the internation | iai application | | |
| 2. | FURTHER ACTIO | N | | | | |
| | If a demand for international preliminary examination is made, this opinion will be considered to be a written opinion of the International Preliminary Examining Authority ("IPEA") except that this does not apply where the applicant chooses an Authority other than this one to be the IPEA and the chosen IPEA has notified the International Bureau under Rule 66.1 bis(b) that written opinions of this International Searching Authority will not be so considered. | | | | | uthority other |
| | written reply togethe | r, where approp | | before the expiration | A, the applicant is invited to submit of 3 months from the date of ma expires later. | |
| | For further options, se | | = | • | - | |
| _ | | | | | | |
| 3. | 3. For further details, see notes to Form PCT/ISA/220. | | | | | |
| Name ar | nd mailing address of the | he ISA/EP | | Authorized officer | | |
| | J | | | | | |
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Facsimile No. Telephone No.

From the

International application No.

PCT/EP2004/003759

| Box | No. I | Basis of this opinion |
|-----|---------------------|---|
| 1. | With regardled, unl | ard to the language, this opinion has been established on the basis of the international application in the language in which it was ess otherwise indicated under this item. |
| | L_ Thi | s opinion has been established on the basis of a translation from the original language into the following language |
| | Rul | e 12.3 and 23.1(b)). |
| 2. | With regi | and to any nucleotide and/or amino acid sequence disclosed in the international application and necessary to the claimed, this opinion has been established on the basis of: |
| | a. type | e of material |
| | | a sequence listing |
| | | table(s) related to the sequence listing |
| | b. form | nat of material |
| | | in written format |
| | L | in computer readable form |
| | c. time | of filing/furnishing |
| | | contained in the international application as filed. |
| | | filed together with the international application in computer readable form. |
| | _ U | furnished subsequently to this Authority for the purposes of search. |
| 3. | | ddition, in the case that more than one version or copy of a sequence listing and/or table(s) relating thereto has been filed or shed, the required statements that the information in the subsequent or additional copies is identical to that in the application as or does not go beyond the application as filed, as appropriate, were furnished. |
| 4. | Additional | comments: |
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International application No.

PCT/EP2004/003759

| Bo | x No. II Priority | |
|----|---|-----|
| 1. | The following document has not yet been furnished: | |
| | copy of the earlier application whose priority has been claimed (Rule 43bis.1 and 66.7(a)). | |
| | translation of the earlier application whose priority has been claimed (Rule 43bis.1 and 66.7(b)). | • |
| | Consequently it has not been possible to consider the validity of the priority claim. This opinion has nevertheless been established the assumption that the relevant date in the claimed priority date. | on |
| 2. | This opinion has been established as if no priority had been claimed due to the fact that the priority claim has been found inva (Rules 43bis.1 and 64.1). Thus for the purposes of this opinion, the international filing date indicated above is considered to be | lid |
| | relevant date. | ihe |
| 3. | Additional observations, if necessary: | |
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International application No.
PCT/EP2004/003759

| citations and ex | planations su | pporting such stat | ith regard to novelty, inventive step or industrial applicability; ement | |
|-------------------------------|---|---|---|--|
| Statement | | | | |
| Novelty (N) | Claims | 1-9 | | YES |
| | Claims | | | NO |
| Inventive step (IS) | Claims | 1-9 | <u> </u> | YES |
| | Claims | | | NO |
| Industrial applicability (IA) | Claims | 1-9 | | YES |
| | Claims | | | NO |
| | Statement Novelty (N) Inventive step (IS) | Statement Novelty (N) Claims Claims Inventive step (IS) Claims Claims Industrial applicability (IA) Claims | Statement Novelty (N) Claims 1-9 Claims Inventive step (IS) Claims 1-9 Claims 1-9 Claims Industrial applicability (IA) Claims 1-9 | Statement Novelty (N) Claims 1-9 Claims Inventive step (IS) Claims 1-9 Claims Industrial applicability (IA) Claims 1-9 |

2. Citations and explanations:

1. Reference is made to the following document:

D1: US-A-3761110

- 2. Document D1 is considered to be the closest prior art to the subject-matter of claim 1. It discloses (the references between parentheses refer to this document):
- a hydropneumatic suspension comprising a suspension cylinder (1) and a hydraulic accumulator (8) which is embodied as a suspension accumulator, and a pilot valve (7) for unblocking or blocking a fluid-guiding connection between the suspension cylinder (1) and the suspension accumulator (8), it being possible to move the pilot valve (7) into the closed position by means of a hydraulic triggering device (12), and the hydraulic triggering device (12) tapping the fluid pressure between the suspension accumulator (8) and assigned suspension cylinder (1) and redirecting it onto an actuating side (20) of the pilot valve (7) via an on-off valve (12) and a pilot supply line (11).
- 3. The problem to be solved with the present invention

International application No.
PCT/EP2004/003759

Box No. V Reasoned statement under Rule 43bis.1(a)(i) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement

can thus be considered to be that a compact valve control device which is efficient in terms of energy is provided for hydropneumatic suspensions, said valve control device ensuring gentle release of the hydropneumatic suspensions, i.e. without "bucking" of the vehicle.

4. The application proposes the following solution: a further proportional valve (50) can be connected into the respectively assignable pilot supply line (38) or is connected into it between the one on-off valve (24) and the pilot valve (20).

Such an arrangement in a hydropneumatic suspension system is neither known from the available prior art nor suggested by it.

The solution proposed to this problem in claim 1 of the present application therefore involves an inventive step (PCT Article 33(3)):

Claims 2 to 10 are dependent on claim 1 and therefore also meet the PCT requirements with respect to novelty and inventive step.